
CORNELL UNIVERSITY OFFICIAL PUBLICATION

VOL. 31

September 1, 1939

No. 5

Announcement of
Farm Study Courses
1939-40
New York State
College of Agriculture

PUBLISHED BY CORNELL UNIVERSITY AT ITHACA, N. Y.

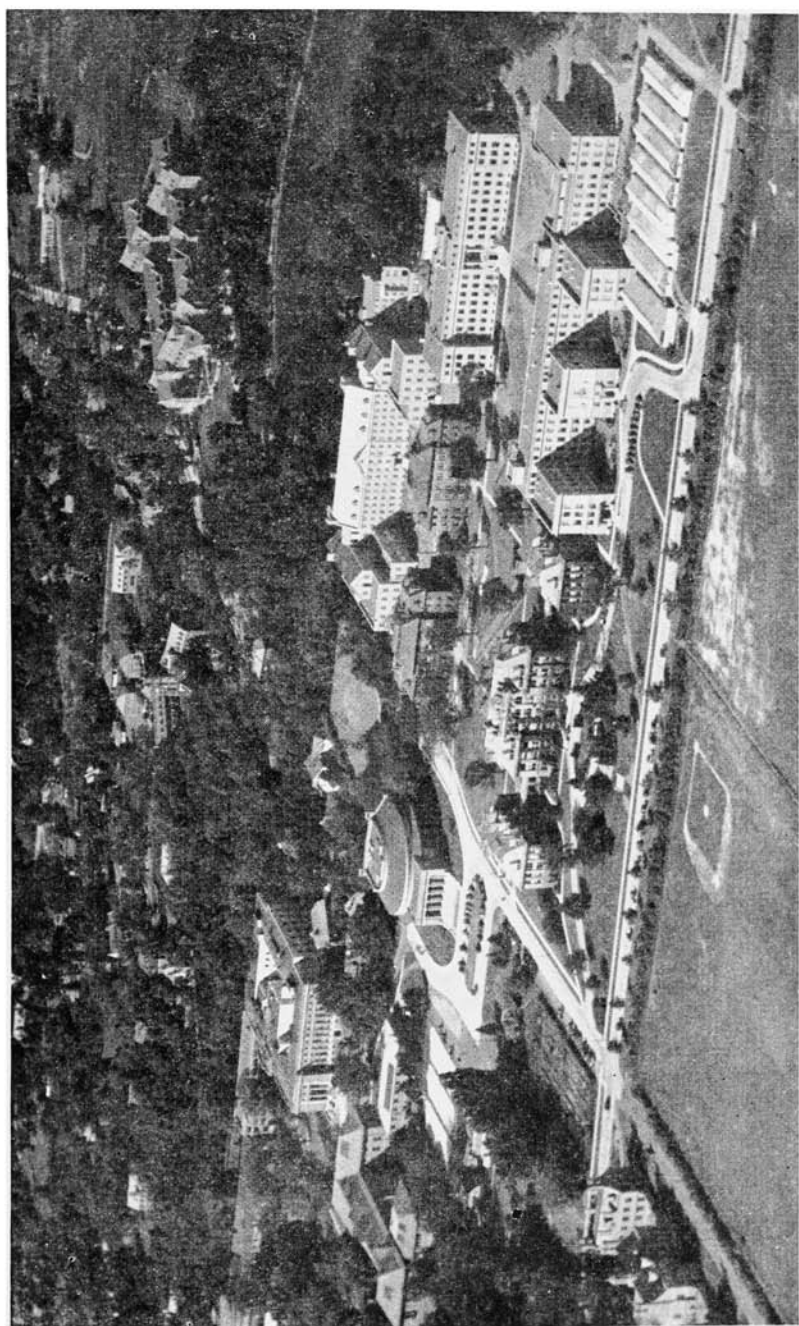
Monthly in September, October, and November

Semi-monthly, December to August inclusive

*[Entered as second-class matter, December 14, 1916, at the post office at Ithaca,
New York, under the act of August 24, 1912]*

THE MAIN GROUP OF BUILDINGS OF THE NEW YORK STATE COLLEGE OF AGRICULTURE

The lower left corner shows part of the hospital of the veterinary college; the semicircular building is Bailey Hall, the largest auditorium on the Cornell campus; the large light-colored building above and at the right of Bailey Hall is Martha Van Rensselaer Hall, which houses the home-economics college; directly at the right of Bailey Hall from left to right are Comstock Hall (entomology), Caldwell Hall (soils and agronomy), and Warren Hall (agricultural economics). In the center foreground is the Roberts Hall group: in the left wing, Stone Hall is the agricultural library, in the center are the offices of the dean, the director of extension, the secretary of the college, and other administrative offices; and the right wing houses the vegetable-crops department. In the lower right corner is the plant-science building. Agricultural buildings not shown in this picture are Fernow Hall (forestry), Rice Hall (poultry), the dairy building, and Wing Hall (animal husbandry).



CORNELL FARM STUDY COURSES

OFFICERS OF ADMINISTRATION

Edmund Ezra Day, President of the University.
Carl Edwin Ladd, Dean of the College of Agriculture.
Lloyd R. Simons, Director of Extension.
Bristow Adams, Chief of Publication.
George Samuel Butts, Supervisor of Farm Study Courses.

INSTRUCTING STAFF

Edmund Louis Worthen, Extension Professor of Soil Technology.
George Harold Rea, Extension Assistant Professor of Apiculture.
John Peter Willman, Associate Professor of Animal Husbandry.
Clinton Beaumont Raymond, Extension Assistant Professor of Vegetable Crops.
Lowell Clem Cunningham, Extension Assistant Professor of Farm Management.
Harold Anthony Willman, Extension Assistant Professor of Animal Husbandry.
Clarence Greenfield Bradt, Extension Assistant Professor of Animal Husbandry.
Homer Seymour Pringle, Extension Assistant Professor of Agricultural Engineering.
Floyd Edward Andrews, Extension Instructor in Poultry Husbandry.
Oscar Anthony Lorenz, Research Assistant in Vegetable Crops.
Louis James Edgerton, Extension Assistant in Pomology.

NEW YORK STATE COLLEGE OF AGRICULTURE CORNELL FARM STUDY COURSES

Why study agriculture?

Most persons study agriculture because they have learned from their own experience and from the experience of others that it pays.

The individual farmer can do little to influence world prices for his products. He can do much, however, to keep down his costs of production and to raise the quality of his products, if he knows how. A dollar saved is as good as a dollar earned, and a business as complex as farming offers many opportunities for savings. Education is now more than ever the key to successful farming, and without doubt the trained farmer makes the most money.



C. G. BRADT

Professor Bradt has been a member of the Cornell extension service for the past ten years and has been concerned with record-keeping, breeding, feeding, and the health of dairy cattle. He is in charge of the farm study courses in dairying.

For the past seventeen years, an ever-increasing number of New York farmers have turned to the Cornell Farm Study Courses as help in managing their farms. These courses offer the latest recommendations based on scientific research and proved practices of successful farmers. New York farmers can study, without leaving home, almost any branch of farming, and they can practice on the farms the principles that are taught.

The courses do not attempt to take the place of college classes, and no college credit is allowed for them. They are meant to give the farmer a chance at spare-time study when he may glean from books and from lessons prepared and marked by teachers at the College, new knowledge which will help him to earn more money and to get greater satisfaction from his job.

Who May Enroll

The student should have at least a grammar-school education, and should be able to practice what he is taught.

So-called practical exercises are a part of most of the courses, and they show the application of the instruction given in the lessons. Incidentally, this requirement insures that the efforts of the College are being spent on persons who are truly interested. Many students write that they find the practical work the most valuable part of their courses.

One may enroll at any time, and, since the lessons are sent out as the reports on the preceding lessons are received, the student's progress depends entirely upon his own initiative. A year is allowed for the completion of any one course, and a certificate is awarded by the College at the completion of each course. A student may enroll for only one course at a time.

The courses are available to residents of New York State only.

Textbooks and Costs

No tuition or other fees whatever are charged for the courses. The student must purchase his own textbooks which, together with postage on reports and necessary writing materials, constitute the only expenses. Several of the courses require no textbook. For most of the courses, one textbook only is required; for some, additional books are recommended as supplementary reading. It is often worth while to make a more thorough study of certain questions brought to

the minds of the students by the courses, and students have appreciated knowing to what books they should refer.

How to Order Textbooks

At the end of the description of each course is given the name of the textbook required and the names of those recommended, with the name of the publisher of each. If the student is unable to buy the books at a local bookstore, it is suggested that he send to the Cornell Co-op, Ithaca, New York. It will prepay the postage if the student says in his letter that he is enrolled for a Cornell Farm Study Course. Orders for textbooks should *NOT* be sent to the College of Agriculture.

How to Enroll

An application blank is at the back of this booklet. Fill in the blank completely and send it to the Cornell Farm Study Courses, Ithaca, New York. A description of the facilities for doing the practical work in the course desired should be given in full. If a student plans several courses in sequence in one general subject, the order in which they will be taken should be planned ahead, and consideration given to the time of year. For example, in enrolling for a poultry course in the fall, one should more properly select Poultry Flock Management than Chick Rearing.

When a student completes a course and continues with a second course, as most students do, he should make a new application for it. He can thereby give his instructor the latest information about his farm business. Separate application blanks can be obtained from the farm-study-course office.

How to Ask Questions

Students often wish questions answered about their own farm business. These should be in the form of a personal letter to the instructor, and such letters may be enclosed with lesson reports. The student should never ask questions on the same sheet with the lesson reports, however.

DESCRIPTION OF COURSES

The following pages describe all of the Cornell Farm Study Courses now available. Inquiries regarding courses other than those offered

are welcome. At Cornell University only the College of Agriculture offers correspondence courses.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

Introduction to Agriculture Assistant Professor L. C. CUNNINGHAM

10 lessons

This course is designed for those persons with no recent farm experience who plan to engage in farming.

In this course the student is given an introduction to the business of farming. Some of the subjects covered are: reasons why certain definite types of farming are found in certain areas, profits to be expected in farming, large versus small farm businesses, specialized versus diversified farming, part-time and subsistence farming, value of practical farm experience, and ways for inexperienced persons to get started in farming.

This course is highly recommended for city persons who are considering farming as a business.

No textbook is required. A specially prepared study manual is sent to the student at the beginning of the course and other reference material is sent as needed. No charge is made for any of this material.

Elementary Farm Management

Assistant Professor L. C. CUNNINGHAM

10 lessons

This course deals with such subjects as farming as a business, factors determining types of farming, deciding on the right type of farming for the student's home region and his home farm, relation of size of farm business to efficiency in the use of labor and capital, deciding on the most profitable size of farm business, diversified versus specialized farming, deciding on the most profitable combination of crop and livestock enterprises for the student's home farm, relation of different rates of crop and animal production to profits in farming, ways of getting efficient use of labor, and determining the most important factors affecting the profits of a farm business.

Several of the lessons in Elementary Farm Management are based on facts and figures which the student obtains locally. Therefore, the course is open only to persons who are actually living on a farm or

those who have had ample farm experience and either own a farm or are closely associated with the management of one. This course is especially recommended for young men who have had farm experience and are getting ready to start in farming for themselves.

No textbook is required. A specially prepared study manual is sent to the student at the beginning of the course and other reference material is sent as needed. No charge is made for any of this material.

Advanced Farm Management

Assistant Professor L. C. CUNNINGHAM

10 lessons

This course must be preceded by either Elementary Farm Management or Introduction to Agriculture.

The course in Advanced Farm Management deals with such subjects as farm layout and building arrangement, the farm-management point of view on farm power and machinery, use of credit and capital, ways of getting started in farming, practical farm records and accounts, and planning the organization and management of a specific farm business.

No textbook is required. All reference material is sent as needed. No charge is made for any of this material.

Milk Marketing

Assistant Professor L. C. CUNNINGHAM

10 lessons

During a decline in the general price level of all commodities, the costs of marketing milk decline but little. These relatively fixed marketing costs are extremely depressing to the farm price of milk. For this reason more attention has been given by farmers to the marketing of milk during recent years. It is the aim of this course to make available to the student the essential facts concerning the marketing of milk from the time it is received at the country plant until it reaches the consumer. This course takes up the specific problems of the geography of the production of milk and milk products, variations in supply, the cost of handling milk in country milk plants and costs of transportation, cost of distribution, the spread between the farm and retail price of milk and how to measure correctly the spread, variations in the demand for milk, factors affecting the price

that farmers receive for their milk, price plans, differentials, cooperative marketing, and public regulation.

This course is recommended for farmers, milk dealers, consumers, and any others who have an interest in milk problems.

No text is required. A specially prepared study manual will be sent to the student at the beginning of the course and other reference material will be sent as needed.

Agricultural Prices

Assistant Professor L. C. CUNNINGHAM

9 lessons

The course explains the principles that govern prices of farm products.

The work of the course is in two parts: (1) a study of the forces that cause the whole price level of the country to fluctuate, and, (2) a study of the reasons why prices of individual farm products fluctuate around the price level.

Each lesson covers one topic. Among the topics studied to obtain an understanding of the price level and prices of farm products are gold, industrial activity, reasons why some prices are sensitive and some sluggish, the relationship between supplies and prices of farm crops, and cycles in the prices of cows, horses, sheep, and hogs.

No textbook is required. Each student is supplied with a study manual especially prepared for this course which gives the important principles of prices.

ANIMAL HUSBANDRY

Feeding and Management of Dairy Cows

Assistant Professor C. G. BRADT

10 lessons, 3 practical exercises

Dairying is probably the most important single farm enterprise in New York State, and the demand for milk from near-by cities is increasing year by year. This, of course, makes efficient management of the dairy herd of great importance to both the farmer and the consumer.

This course deals with practical problems of feeding and managing dairy cows economically. It is intended for persons who are actually



A HOME VEGETABLE GARDEN

The home vegetable garden can be the most valuable piece of land on the farm

in the milk-producing business or for those who have a chance to study a herd of cattle at first hand.

The following topics are covered: feeding for milk production, kinds and composition of feeds, fitting and management of dairy cows, cost of producing milk, housing, and causes and treatment of some of the common ailments and diseases of cattle.

Textbook: *Dairy Cattle and Milk Production* (1939 edition) by Eckles, Anthony, and Palmer, published by the Macmillan Company, New York City. \$3.60.

Dairy Herd Improvement

Assistant Professor C. G. BRADT

9 lessons, 1 practical exercise

The best management cannot produce satisfactory results from inferior cows. Thousands of dollars are wasted annually in this State alone in feeding cows which do not pay for their board. The efficient dairyman tries to improve the quality of his herd.

This course presents practical ways and means of getting better cows. First, the inferior cows must be identified and removed, and

then better ones obtained by better breeding practices. Breeding practices and methods of improvement that can be followed by all are presented clearly and in detail. The course should appeal to the man of limited means who realizes that good cows are essential to good profits, and are easily within his reach.

Textbooks: Same as for Feeding and Management of Dairy Cows.

Rearing Calves and Heifers

Assistant Professor C. G. BRADT

7 lessons, 3 practical exercises

The care which a calf receives in the first few months can determine to a great extent whether or not it will make a good cow. However, this course considers not only the essential steps in rearing the calf from birth to maturity, but it recognizes that more than good feed and care is necessary to produce a good cow. So much depends upon the health and the vigor of the parents, as well as upon the sanitary conditions of housing and care, that these also receive attention.

The topics with which this course deals are: feeding of calves, both with milk and milk substitutes; housing, which includes ventilation and plans for stables and pens; losses from the common diseases of calves and heifers, and how they can be prevented; and the importance of high-producing ancestry in the selection of calves to raise.

Textbook: Same as for Feeding and Management of Dairy Cows.

Sheep and Wool Production

Assistant Professor H. A. WILLMAN

9 lessons, 5 practical exercises

Sheep are coming back to many New York farms. This course is valuable to producers of both wool and mutton, and describes practices which successful shepherds in the State find profitable. It requires work with a flock and follows the management of this flock throughout the year.

The course considers such topics as establishing the flock, winter care and feeding, rearing lambs, the wool grower and the wool trade, common ailments of sheep, dipping, trimming the feet, parasites and parasitic diseases, stomach worms, summer feeding and care, feeding for market, winter or hot-house lambs, fitting for the show ring, judging sheep, and breeds.

Textbook: *Productive Sheep Husbandry* (1937 edition) by W. C. Coffey, published by J. B. Lippincott Company, Philadelphia. \$3.00.

Pork Production

Associate Professor J. P. WILLMAN

15 lessons, 2 practical exercises

Pigs, rightly handled, fill an important place on many New York farms. This course deals especially with New York conditions, and is based on the practices found profitable by practical swine producers as well as by scientific men.

The subjects considered are: the care of the herd throughout the year, brood sows and pigs, housing, forage crops, feeds, feeding and rations, sanitation, judging, breeds, breeding, and marketing. A study is also made of the cost of producing pork in New York State.

Textbook: *Pork Production* (1937 edition) by William W. Smith, published by the Macmillan Company, New York City. \$3.75.

BEEKEEPING

Beekeeping

Assistant Professor G. H. REA

13 lessons, 8 practical exercises

Many New York State farmers find beekeeping both a fascinating and profitable side line to their farm business, and some have apiaries which demand their full time and attention. Bees are not unlike dairy cows or poultry in that the best care and management are necessary to avoid disease and to have profitable production. A knowledge of how to market honey and other products of the apiary is also necessary to the successful beekeeper.

The lessons and exercises consider such topics as a survey of the beekeeping industry, apiary site and equipment, study of the colony and the individual, state laws regarding bees, general care and management for both comb- and extracted-honey production, and the grading and marketing of honey.

Textbook: *Beekeeping* (revised edition) by Everett Franklin Phillips, published by the Macmillan Company, New York City. \$4.00.

Recommended books: *The ABC and XYZ of Bee Culture* (1935

edition) by A. I. and E. R. Root, published by the A. I. Root Company, Medina, Ohio. \$2.50; and *Productive Beekeeping* (third edition) by Frank C. Pellett, published by the J. B. Lippincott Company, Philadelphia. \$3.00.

FRUIT GROWING

Orchard Fruits

Mr. L. J. EDGERTON

17 lessons, 8 practical exercises

Fruit growing in New York becomes more exacting each year. It is necessary to produce good fruit economically if one is to be a commercial fruit grower. This requires technical knowledge and good management. Also, the farmer with the home orchard gets great satisfaction from taking proper care of his trees even if the profit he may make from them is not so important.

The lessons and practical exercises cover practically every aspect of growing orchard fruits, from selecting the site and establishing the orchard to harvesting, grading, and packing the fruit.

Textbook: *Orchard and Small Fruit Culture* (1937 edition) by E. C. Auchter and H. B. Knapp, published by John Wiley and Sons, Inc., New York City. \$5.00.

Small Fruits

Mr. L. J. EDGERTON

10 lessons, 6 practical exercises

Small-fruit growing is an important industry in certain sections of New York, and this course has been especially helpful to many growers.

The lessons are arranged in groups according to kinds of fruit studied, which are: the strawberry, brambles, grape, currant, and gooseberry. For each, the lessons cover such operations as planting, harvesting, and insect and disease control. The practical exercises allow field practice in similar operations. The student is allowed some choice in the exercises he reports.

No textbook is required. The course is based entirely on bulletins from Cornell, Geneva, and other experiment stations. These bulletins are sent without charge as needed.

POULTRY HUSBANDRY

Poultry Flock Management

Mr. F. E. ANDREWS

14 lessons, 7 practical exercises

Keeping poultry as a business has increased greatly in New York State during the past few years. Poultry responds to scientific treatment very readily, which in part probably accounts for the great popularity of the poultry farm-study courses.

This course deals with the management of a laying flock, and covers housing and hygiene, feeds and feeding, artificial illumination, culling, diseases, and record keeping. It deals also with the marketing of poultry and eggs. The practical exercises give the student an opportunity to carry out most of these operations under the guidance of the College, and, of course, this requires that the student have a flock of chickens.

Textbook: *Practical Poultry Farming* by L. M. Hurd, published by the Macmillan Company, New York City. \$2.50. Recommended book: *Practical Poultry Management* by James E. Rice and Harold E. Botsford, (third edition) published by John Wiley and Sons, Inc., New York City. \$2.75.

Chick Rearing

Mr. F. E. ANDREWS

8 lessons, 4 practical exercises

Raising baby chicks can be one of the most interesting and at the same time one of the most discouraging aspects of the poultry business. The most experienced poultrymen will be likely to lose many chicks, and beginners sometimes have a mortality that is discouraging indeed.

Every aspect of caring for chicks from the time they are a day old until they are mature pullets ready for the laying house is thoroughly covered. A study is made also of brooding systems and of brooder houses and stoves, pointing out the essential features to be looked for when purchasing a brooder stove. Students, after completing this course, often express wonder that any of their chicks ever reached maturity with the care which they were accustomed to giving them.

Textbook: Same as for Poultry Flock Management.

Poultry Flock Improvement

Mr. F. E. ANDREWS

9 lessons, 3 practical exercises

Poultry breeding is a relatively new science but a very old art. It has been practiced as an art from the time the first jungle fowls were captured and domesticated for the purpose of cock fighting,—the sport of kings. In modern times the art, with the application of science, has produced a large number of breeds and varieties of chickens, with extreme variations in size, shape, and color. Individual birds which have laid nearly 365 eggs in one year have been bred. Many persons breed birds purely as a hobby.

The course covers classification of breeds, principles and practices of culling, selecting, and mating breeding stock, and record keeping.

Textbook: *Judging Poultry for Production* by Rice, Hall, and Marble, published by John Wiley and Sons, Inc., New York City. \$3.75.

Recommended books: *American Standard of Perfection*, published by American Poultry Association, Fort Wayne, Indiana (1939 edition). \$2.50. *Poultry Breeding* by M. A. Jull, published by John Wiley and Sons, New York City. \$3.75.

Incubation

Mr. F. E. ANDREWS

6 lessons, 2 practical exercises

Reproducing a large part of the flock each year is one of the poultryman's biggest problems. Many losses are experienced because of lack of knowledge concerning the requirements of the hatching eggs during incubation. Such knowledge is essential to anyone who attempts to do his own incubating. This course is especially helpful to commercial hatcherymen.

This course is a study of the formation of the egg and the development of the chick, selection and care of hatching eggs, artificial incubation, types and operation of incubators, and pedigree hatching.

Textbook: *Practical Poultry Management* by Rice and Botsford, published by John Wiley and Sons, Inc., New York City. \$2.75.

AGRICULTURAL ENGINEERING**Farm Mechanics**

Assistant Professor H. S. PRINGLE

8 lessons

To be able to make minor repairs on a harness or to splice a broken

hay rope on the farm immediately when needed, not only saves a farmer money but time which cannot always be reckoned in dollars and cents. This course teaches one how to do these along with many other operations which a farmer should be able to do. Although only eight lessons are required, the student may select these from a total of fifteen, and, of course, if he wishes, he may do all of them.

Instruction is given in the following subjects: rope work, soldering, harness repairing, belts and pulleys, fitting saws, sharpening edged tools, caring for small hand tools, and common rafter framing.

No textbook is required, but *Farm Mechanics*, Vol. I, by B. B. Robb and F. G. Behrends, published by John Wiley and Sons, Inc., New York City, \$2.50, is recommended. There is a small cost for the supplies needed for some of the lessons. These supplies, however, can be used on the farm later when actual need for them arises.

SOILS

Soil Management and Fertilization

Professor E. L. WORTHEN

12 lessons

Good soil management is essential to the economic production of crops. Improper management can deplete the best soils in a few years, and on the other hand soils that are not naturally productive can often be made so by drainage, crop rotation, growing legumes, and by the use of lime and fertilizer. It is evident, therefore, that a practical knowledge of soil management and fertilization is of the greatest importance to every farmer.

Each lesson in this course is closely related to an actual farming operation. The following topics are covered: selecting the soil and planning its management, growing the crop, controlling the water supply, tilling the soil, manuring, fertilizing, managing field soils, managing pasture soils, managing garden and lawn soils, and managing fruit soils.

Textbook: *Farm Soils* (second edition) by Edmund L. Worthen, published by John Wiley and Sons, Inc., New York City. \$2.75.

VEGETABLE CROPS

Commercial Vegetable Growing

Mr. O. A. LORENZ

13 lessons, 6 practical exercises

Vegetable production is an important type of farming in New York

State and it is increasing in importance yearly as the agriculture shifts from a general to specialized types. This course is intended for persons who are engaged in vegetable production as a business and for those who contemplate going into this business.

The first eight lessons cover the general aspects of vegetable growing such as: soils for vegetable growing; soil preparation; manures, green manures, and commercial fertilizers; plant growing; construction and management of hotbeds and cold frames; and the harvesting and handling of vegetable products as these operations are carried on in New York State. The remaining five lessons are on specific crops, or in some cases, groups of crops. The student is allowed to select the particular crops, or group of crops, he wishes to study. The practical exercises show the application of the lessons to vegetable growing according to the season of the year.

Textbook: *Vegetable Crops* (third edition) by H. C. Thompson, published by the McGraw-Hill Book Company, New York City. \$5.00.

Home Vegetable Gardening

Assistant Professor C. B. RAYMOND

12 lessons

This course is intended for all home gardeners whether in town or in the country. Housewives, and especially those who have studied nutrition in home-bureau groups, find the course an interesting and valuable supplement to their food studies. Older boys and girls who have completed two years of the junior garden project are invited to enroll.

The topics covered are: the garden layout; factors affecting plant growth; seedage; producing plants; soils and their preparation for planting; maintaining organic matter and fertilizers; moisture supply; cultivation, irrigation, and mulch; and a study of all the various vegetables that are grown in home gardens.

Textbook: *Vegetable Growing* (second edition) by J. E. Knott, published by Lea and Febiger, Philadelphia, \$3.25.

Application for Enrollment

(Please print or typewrite name and address)

Return this blank when filled out to Cornell Farm Study Courses,
New York State College of Agriculture, Ithaca, New York.

Put questions you want answered now on another sheet, and be
sure to put your name and address on it.

Date.....Course you wish.....

Name in full.....

R.F.D.

Street.....Post office.....

County....., N. Y.

How much time can you devote to study?.....

What is your object in taking the course?.....

Give name of schools attended and number of terms in each.....

Outline briefly your experience with the subject of this course; tell whether as
owner, owner's son, tenant, hired man, or other status.

What is your occupation?.....Age.....

(If a farmer, what position on the farm)

Give the location, size, and type of farm where you will do the practical work of
the course, describing fully the particular enterprise with which this course is
concerned. (See note.)

Are your family members or officers of the farm bureau, the home bureau, the
Grange, the cooperatives, or other organizations? State which.....

How did you first learn of the course?.....

Number of farm study courses completed, if any.....

Note: The information on this sheet guides the instructor in his personal help
to you. Use the back for anything further that you think will help him.

